

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F.
Larsen

January 1971

Test 1074: Deutz 8006 Diesel

Tractor Museum

University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/tractormuseumlit>



Part of the [Applied Mechanics Commons](#)

Museum, Tractor, "Test 1074: Deutz 8006 Diesel" (1971). *Nebraska Tractor Tests*. 1401.

<https://digitalcommons.unl.edu/tractormuseumlit/1401>

This Article is brought to you for free and open access by the Tractor Test and Power Museum, The Lester F. Larsen at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Tractor Tests by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

NEBRASKA TRACTOR TEST 1074 – DEUTZ 8006 DIESEL

POWER TAKE-OFF PERFORMANCE

Hp	Crank- shaft speed rpm	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Temperature Degrees F Cooling medium	Air wet bulb	Air dry bulb	Barometer inches of Mercury
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—1075 rpm)								
85.51	2100	5.067	0.414	16.88	air-cooled	70	76	28.827
Standard Power Take-off Speed (1000 rpm)—One Hour								
82.18	1954	4.870	0.414	16.87	air-cooled	70	76	28.810
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
73.74	2130	4.266	0.404	17.29	air-cooled	70	76	.....
0.00	2198	1.246	....	....	air-cooled	70	76	.....
37.41	2163	2.655	0.496	14.09	air-cooled	70	76	.....
84.85	2101	5.065	0.417	16.75	air-cooled	70	77	.....
18.98	2193	1.895	0.697	10.02	air-cooled	70	77	.....
55.96	2156	3.467	0.433	16.14	air-cooled	70	77	.....
AV 45.16	2157	3.099	0.479	14.57	air-cooled	70	77	28.800

DRAWBAR PERFORMANCE

Hp	Draw- bar pull lbs	Speed miles per hr	Crank- shaft speed rpm	Slip of drivers %	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Temp Degrees F Cool- ing med	Air wet bulb	Air dry bulb	Barometer inches of Mercury
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours—11th Gear (Z4)											
69.48	5096	5.11	2100	7.93	4.994	0.502	13.91	air-cooled	66	86	28.950
75% of Pull at Maximum Power—Ten Hours—11th Gear (Z4)											
56.16	3939	5.35	2145	5.72	3.963	0.493	14.17	air-cooled	64	83	28.967
50% of Pull at Maximum Power—Two Hours—11th Gear (Z4)											
39.74	2682	5.56	2185	3.80	3.115	0.547	12.76	air-cooled	61	71	29.010
50% of Pull at Reduced Engine Speed—Two Hours—12th Gear (N4)											
39.53	2675	5.54	1685	3.69	2.649	0.468	14.92	air-cooled	65	83	28.960
MAXIMUM POWER WITH BALLAST											
61.88	8898	2.61	2142	14.67			8th Gear (N2)	air-cooled	57	67	29.080
69.58	8466	3.08	2099	14.32			9th Gear (Z3)	air-cooled	57	67	29.080
70.94	6344	4.19	2100	9.80			10th Gear (N3)	air-cooled	63	78	29.000
73.04	5354	5.12	2095	7.56			11th Gear (Z4)	air-cooled	60	72	29.080
74.46	4150	6.73	2101	6.19			12th Gear (N4)	air-cooled	65	84	29.000
73.37	3264	8.43	2101	4.77			13th Gear (Z5)	air-cooled	67	89	29.000
MAXIMUM PULL WITHOUT BALLAST											
68.93	5307	4.87	2123	14.68			11th Gear (Z4)	air-cooled	70	81	28.800
VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST											
Pounds Pull					5354	5614	5849	6136	6101		6069
Horsepower					73.04	68.44	62.94	57.33	49.49		40.64
Crankshaft Speed rpm					2095	1889	1676	1465	1271		1049
Miles Per Hour					5.12	4.57	4.04	3.50	3.04		2.51
Slip of Drivers %					7.56	8.49	8.89	9.54	9.54		9.41

TRACTOR SOUND LEVEL (without cab)

	dB(A)
Maximum Available Power 2 Hours	98.5
75% of Pull at Max. Power 10 Hours	98.0
50% of Pull at Max. Power 2 Hours	96.5
50% of Pull at Reduced Engine Speed 2 Hours	93.5
Bystander 16th gear (N6)	84.5

TIRES, BALLAST and WEIGHT

		With Ballast	Without Ballast
Rear Tires	—No, size, ply & psi	Two 18.4-34; 6; 16	Two 18.4-34; 6; 16
Ballast	—Liquid	968 lb each	None
	—Cast iron	1140 lb each	None
Front Tires	—No, size, ply & psi	Two 7.50-18; 6; 24	Two 7.50-18; 6; 24
Ballast	—Liquid	None	None
	—Cast iron	None	None
Height of drawbar		17 inches	18½ inches
Static weight with operator—rear		8810 lb	4595 lb
	front	2250 lb	2255 lb
	total	11060 lb	6850 lb

Department of Agricultural Engineering
 Dates of Test: August 17 to September 2, 1971
 Manufacturer: KLOCKNER - HUMBOLDT -
 DEUTZ A. G., Cologne, West Germany

FUEL OIL and TIME Fuel No. 2 Diesel
 Cetane No. 53.5 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.8387 Weight per gallon 6.983 lb. Oil SAE 30 API service classification MS, DG, DM, DS To motor 3.927 gal. Drained from motor 2.999 gal. Transmission and final drive lubricant SAE 20 Total time engine was operated 53½ hours.

ENGINE Make Deutz Diesel Type 6 cylinder vertical Serial No. 4958737 Crankshaft Mounted lengthwise Rated rpm 2100 Bore and stroke 3.94" x 4.72" Compression ratio 17 to 1 Displacement 345 cu. in. Cranking system 12 volt electric Lubrication pressure Air cleaner dry replaceable paper element with automatic dust unloader Oil filter replaceable pleated paper cartridge Oil Cooler radiator for crankcase oil Fuel filter replaceable primary paper element and replaceable secondary paper cartridge Muffler was used Cooling medium temperature control air-cooled.

CHASSIS Type standard Serial No 7932/757 Tread width rear 60" to 80" front 56" to 76" Wheel base 100.4" Center of gravity (without operator or ballast, with minimum tread, with fuel tank filled and tractor serviced for operation) Horizontal distance forward from center-line of rear wheels 31" Vertical distance above roadway 35" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system direct engine drive Transmission synchronized (except 1st and 2nd gear) selective gear fixed ratio Advertised speeds mph first 0.62 second 0.75 third 0.93 fourth 1.18 fifth 1.48 sixth 1.86 seventh 2.30 eighth 2.98 ninth 3.54 tenth 4.60 eleventh 5.47 twelfth 7.08 thirteenth 8.76 fourteenth 11.31 fifteenth 13.86 sixteenth 17.90 reverse 0.75, 1.18, 1.86, 2.92, 4.54, 7.02, and 11.25 Clutch dry disc dual clutch operated by foot pedal and hand lever for pto Brakes internal expanding shoes operated hydraulically by two foot pedals that can be locked together Steering hydraulic with power assist Turning radius (on concrete surface with brake applied) right 155" left 161" (on concrete surface without brake) right 169" left 179" Turning space diameter (on concrete surface with brake applied) right 322" left 334" (on concrete surface without brake) right 354" left 370" Belt pulley 1390 rpm at 2100 engine rpm diam. 11" face 7" Belt speed 4000 fpm Power take-off 1000 rpm at 1954 rpm.

REPAIRS and ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with SAE and ASAE test code or Nebraska test procedure. First, second, third, fourth, fifth, sixth, and seventh gears were run as it was necessary to limit the pull in eighth gear because of excessive slippage. Fourteenth, fifteenth and sixteenth gears were not run as test procedure permits only one gear over eight miles per hour. Final inspection revealed that the upper weld on left hand hood guide was broken.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1074.

L. F. LARSEN

Engineer-in-charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers

The University of Nebraska Agricultural Experiment Station
 E. F. Frolik, Dean; H. W. Ottoson, Director; Lincoln, Nebraska